

OYSTER CAN GROW HERE

Protection Needed Against Its Enemies.

OYSTERS, if properly protected from their enemies, the starfish and crab, can be grown in Hawaiian waters as successfully as in any other waters on both the Atlantic and Pacific coasts. The recent investigations of the experiments in oyster cultivation in Pearl Harbor showed that the oysters had not lived and the experiment to all intents was pronounced a failure. W. N. Armstrong, who has had wide experience in the propagation of oysters along the Atlantic coast, fails to see that the result of this experiment proves that the cultivation of the bivalves cannot be carried on successfully if the same precautions as are employed by the French cultivators are established here. Time and patience are two attributes in the raising of oysters which are essentials which must be taken into consideration.

"The conditions for raising oysters in Pearl Harbor," said Mr. Armstrong yesterday, "are wholly favorable. The existence of shell mounds at various places in the harbor indicates that the oyster flourished here at some previous time. They were of an excellent shape although the shells appear to be thicker than the ordinary ones owing probably to the existence of so much lime in the water. That part of the Island of Oahu was thrown up by some eruption, a distance of some thirty feet, and probably all the oysters were then destroyed, and there has been no growth since then that has amounted to anything. The oyster flourishes in the tropics as well as in the temperate zones. An excellent quality is found in Tahiti. The late British Commissioner Hawes stated that he had found quite an abundance of fine oysters on the coast of Tahiti. In the Gulf of California very large and luscious oysters are found. On both sides of Cuba there are excellent oysters. They flourish in warm waters. In the Gulf of Mexico all along down the coast of Texas to the Mexican line they are found in quantities. It is conceded, however, that the oyster of the tropics is not quite as fine as that obtained in the colder regions.

"The water of Pearl Harbor contains just the proper mixture of salt and fresh water to produce a good oyster. It is of the same quality as the water of the Chesapeake Bay in which the largest quantities of oysters in the United States are produced. Prof. Agassiz, when he was here two or three years ago, looked into the matter and agreed that there was no reason why the oysters should not flourish here as well as elsewhere and strongly advised that experiments be made.

"But the oyster in every country has to fight its enemies. In Long Island Sound where the finest quality are found for the eastern American market, the starfish is so destructive that it at times imperils the industry. Cases are known where a body of starfish have settled on a body of oysters and have destroyed in twenty-four hours as many as 20,000 bushels. In the Bay of San Francisco the same difficulties are met with, and probably the most expensive oyster grounds in the United States are in San Francisco Bay because they have to be protected by upright planks driven into the mud like a stockade so that the starfish cannot penetrate it. In the event of the loss of a single plank starfish would certainly get in and destroy large quantities. These enemies have largely interfered with the growth of the oyster industry in the waters around California.

"Small experiments have been made in oyster growing in Pearl Harbor but they have not been conducted intelligently or with skill, and it is not surprising there has been no success in the venture. All the oysters that have been planted there have not been protected from the crabs and starfish and perhaps other fish. The difficulties of raising oysters here cannot be any greater than in the Bay of San Francisco and in some parts of the Eastern States where protection is obtained only at vast expense.

"Probably the French system of oyster culture would be the most successful in the Hawaiian Islands. If a fish pond covering half an acre, was properly prepared and the sides either cemented or walled in to prevent the crabs or starfish from coming in, and the communication between the harbor and pond made through thin wire sieves so as to permit the free ingress and egress of water at all times, there would be every reason to believe the oyster would thrive. After the oysters were planted in the pond they would have to become acclimatized, for experience shows that oysters will not breed immediately after removal, and in some cases they will not breed for two or three years. If the oysters thrive, as they will thrive, and experience shows they do thrive here, then after the acclimatization has set in the breeding will take place. Then if the enemies are carefully excluded, the spat or spawn will fix itself to any rocks or smooth substances that may be in the pond. These spawn would be removed after a few months to another pond and the small oysters given more room. This is the French system which is practiced with great success for the Parisian market.

"There one class of laborers does nothing but to catch the spawn of the oyster and when it is the size of a pea it is sold to another class of laborers who plant these small oysters in rows in the bottom of ponds and then transfer them from time to time to larger



ponds. This is done with such skill and rapidity that the cost of raising oysters is small. The illustration of the oyster is taken from the book written by Prof. Brooks of Johns Hopkins University, when he was commissioner for the State of Maryland, and conducted investigations into the propagation of the oyster industry. The illustration shows an oyster in the right valve of the shell, dissected so as to show the internal organs. The anterior end of the body is at the top, and the dorsal surface, on the right hand; b, the mantle; c, the muscle; d, the heart; e, the gill; f, the lips; g, the intestine; h, the liver; i, the mouth; s, the stomach. Mr. Armstrong says that even the oldest of the oyster fishermen are ignorant of the anatomy of the oyster and it was not until Prof. Brooks described it that many of the fishermen knew the oyster had a mouth. They were also ignorant of the oyster's feeding. The food of the oyster is a "diatom," which has to be put under a magnifying glass to be seen at all. It looks like the head of a pine tree. These are not great, and nearly all are saved from their natural enemies.

It would probably take from three to five years to establish the business in Pearl Harbor. That is, to find out the best conditions under which they can be raised. It is not a matter of much expense, but of careful watching and creating the right conditions. If the true method of protecting young oysters is once found out, then the business can be carried on to an indefinite extent, and probably ten acres would fully supply the city of Honolulu, and this food should then be the cheapest fish food in the market. In Kaneohe Bay there is a vast extent of ground that can be used for oyster cultivation, but nothing can be done until the preliminary experiments in the way of protecting the oysters in their first stages have been established.

"In Chesapeake Bay, where the industry is carried on on a very large scale, the oyster has enemies, especially the crab, but there is such a vast amount of ground under water which contains shells and suitable material for carrying the spawn of the oyster that even after the destruction of many millions of young oysters, there is still enough left to supply the general demand.

"It is probable that the United States Fish Commission will in time send out an expert to study this subject. The expert will probably throw considerable light on the matter, but after all his investigations, he will come to the conclusion, and that is in order to make the cultivation successful, the oyster here must be protected, as in many other places, and when that is done, there will be no difficulty in obtaining all the oysters that are needed for home consumption. Emperor Napoleon III, after the oyster beds of France had been exhausted, caused the matter to be investigated by experts who visited the United States and England, and then established the artificial propagation of oysters, and in one section alone of the Bay of Biscay, by the protection afforded the young oysters, the output was raised from 4,000,000 to 30,000,000. In this case they used roof tiling, piled it up on the seashore, and the spat of the oysters floating in from the ocean, fixed itself to "diatoms" are generated in the sea, as well as in the fresh waters, and the oyster flourishes best at the junction of the sea and fresh water.

An examination of the water of Pearl Harbor shows an abundance of "diatoms" of both kinds, which settles the question as to whether the oyster can obtain sufficient nourishment to live. The hairs which appear as a fringe on the oyster in the illustration, are the instruments by which the oyster feeds himself. These are constantly in motion, and as the water passes through between the shells, the diatoms are caught on these hairs and moved toward the mouth. The oyster cannot reach for his food, but catches it out of the moving water by these innumerable hairs. If the water moves rapidly, he is able to increase the amount of his food and becomes fat. If he lays in stagnant water or in water which moves slowly, the food is decreased and the oyster starves.

When they become visible to the naked eye they are detached with knives and sent to the oyster cultivators, who grow them in their parks or ponds, so that the French supply is now mainly artificial.

"The large Eastern oyster that is consumed so largely in San Francisco, and which is grown in the Bay of San Francisco, is distinct from the native California oyster. It is not so fine as the native oyster, probably owing to the excess of fresh water in the bay. Experts claim that the native California oyster is a better flavor than the Eastern oyster grown in the bay. There is already an export trade of the latter to Eastern markets. Both kinds should be experimented with here."

Mr. Armstrong will soon depart for the Coast, and will undertake the planting of oysters in a small inlet branching off from San Diego Harbor. He has found conditions there extremely favorable to the propagation of the oyster. It was only recently that the right was secured

THE LITTLE WHITE CORDS.

Those little white cords called nerves—the human body is full of them. The brain is the nervous centre, and from it the nerves run out to almost every point in the system, somewhat as telegraph wires radiate from a great city like London.

In some ways, which no man is cunning enough to understand, the nerves are conductors of sensation and of power. You have no doubt seen cases of more or less complete paralysis. Sometimes they are so dreadful and shocking that one turns from the sight in disgust and horror.

Yet to the action of the nerves we owe all our feelings of pleasure. Without them we should be insensate and helpless as logs of wood. Nay, worse, we should have no life at all; not even the life of a creeping vine or of a sleepy oyster.

A man may have the bulging and knotted muscles of a prize fighter, but unless his nerves operate naturally he has no strength. You see it, it all comes from the head, as the electric current comes from a battery.

Now the nerves, if we hope to keep them in order, must be fed—just as the rest of the body must be. Weak nerves always cause pain or some other sort of discomfort or distress.

This is why Mrs. A. Sanderson, who lives at 51 Brown street, Adelaide, S. A., had so miserable a time from neuralgia for nearly nine years. The pain was so intense that she lay awake whole nights on account of it—an experience much more common than it should be among women.

The lady's appetite failed, and, as might be expected, she got weak from want of her proper food. It was, therefore, a hard task (I mean the ordinary home work) it was a hard task to do even the easiest part of it.

In a letter which she was good enough to write on the 23rd of April of this year (1900), Mrs. Sanderson says:—"I was in this state for about nine years, as I have already said. The doctors prescribed for me, and I tried scores of things that people recommended or that I came to hear of.

"Although I hoped and prayed that some of these numerous medicines would prove to be just what I needed, none of them did.

"About three years ago some one happened to speak to me of what a splendid remedy Mother Seigel's Syrup is for indigestion, dyspepsia, rheumatism, nervousness, and, in fact, any complaint arising from impurity of the blood.

"I was talked into trying Mother Seigel's Syrup, and have congratulated myself on it from that day to this.

"Before I had finished two bottles I was better, and in a month the neuralgia was gone and my appetite restored. Now I enjoy my meals, sleep well, and have good general health.

"I am well known in Adelaide, and you have my consent to the publication of my case."

McKinley's Will.

CANTON, O., Sept. 30.—The will of President McKinley was admitted to probate today. In pursuance of the wishes of Mrs. McKinley, and upon her signed recommendation, the court appointed Judge William R. Day and Secretary George B. Cortelyou, administrators. A joint administrators' bond of \$100,000 was filed. In their application for letters testamentary Judge Day and Secretary Cortelyou say that the amount of personal property left by the late President will be about \$149,000, and of real estate about \$70,000, aggregating about \$219,000. Mrs. McKinley remains in about the same condition. She took her usual toilet today.

Dole Has Not Resigned.

WASHINGTON, Sept. 30.—Henry E. Cooper, Secretary of Hawaii, has arrived today and denied the report that he was bearing the resignation of Governor Dole to the President. Mr. Cooper said that, so far as he knew, Governor Dole not only has not resigned, but has no intention of resigning. To him the Governor had not even mentioned or intimated that he had any such purpose in view.

MANCHURIA'S MINERALS

Gold Mines May Be of Great Value.

"Manchuria is a very valuable country," said Mr. L. W. Smith, of San Francisco, last evening, in discussing the East, at the Hawaiian Hotel. Mr. Smith is a Californian, whose connection with the Russian Fur Company has taken him to Northern Siberia during the past year, and who, on his way home has stopped here to look into the conditions of sugar and labor. Continuing, he said: "There is no way to estimate the mineral wealth of that country, for the whole of it has not been explored as yet.

"The mines of Korea will yet surprise the world with their wealth. In conversation with a member of the engineering staff of the American company which has the concession in the north of Korea, just a few miles from the boundary line of Manchuria, he expressed the opinion that the developments in that section of the country would be very great, and that when the Manchurian mineral was developed there would be found even greater wealth. The ores are not of high grade, but it is the belief that the edges when they are found will be of immense extent. His description of the country leads me to believe that there is simply a succession of low, rolling hills, lower even than the California foothills, and that a few miles from the valley there is found some gold in the stratum above the bedrock. So far, this is not worked, as the stratum is light, and there is no way to tunnel for this gold, the ground being simply light soil, which gives way in the pressure of rain.

"It is very probable that there will be much wealth found in the entire Manchurian district. The general opinion in the East is that once Russia has taken over that territory the country will be made purely Russian district. The railroad down through the country is doing much for the end, and the Russian people never give up once they set out to do anything. It may be delayed, but never defeated. There is, of course, much feeling in the East between the Russians and the Japanese, and there are many persons in both countries who fear that there will be a collision at some time between the nations, and it is a fact that there is a great deal of bad blood. This is seen in all lines, and whatever the result, the feeling, with its effect upon the business relations of the country, will continue for some time.

"The trade of Siberia, especially of the sea coast of that country, is greatly on the increase, and with it the trade of the western coast of America must grow in proportion. There is no place in the East where the growth of the American trade is so well shown as in the Siberian towns. For the distance the government is closely watching everything developing in the United States. On the America Maru there was an engineer whose mission to the United States was to investigate the progress in railway equipment. He intends to look into cars and shops and will continue on his way to St. Petersburg, traveling east.

"All over the East there is a feeling of growing trade. In Russia the government is preparing for development along all lines, and is protecting its own people first. There has been a great amount of change in methods of the scalars on the Copper Island rookeries, the Japanese having been warned off by the Russians, and many captures being made during the season. There seems to be a plan among many Japanese sailors of giving their schooner American names, which may account for the reports, seeming to include American ships."

DUKE OF YORK AT VANCOUVER

VANCOUVER, B. C., Sept. 30.—The Duke and Duchess of Cornwall and York arrived here at noon today. As the royal train rolled into the station a royal salute was fired by the ships of the Pacific squadron, royal navy, now at anchor in the harbor. Preceded by carriage containing Sir Wilfred Laurier, the premier of Canada, and the Countess of Minto, wife of the governor general of Canada, and the members of the Duke's staff, the royal couple were driven to the court-house. Their carriage was drawn by four horses ridden by postillions, and they were accompanied by a guard of honor composed of sixty members of the northwest mounted police.

On a covered platform at the court-house, the Duke and Duchess were received by the mayor, the aldermen, the local clergy and the Corps of Kings' command.

A formal address of welcome was presented to the Duke, to which his Royal Highness, who wore an admiral's uniform, replied in a happy speech. Then the Duchess was presented by the local council of women with a beautiful morocco-bound album of British Columbia views. The Duchess, who was dressed in black, looked handsome, and accepted the gift in a few words of thanks.

Re-entering the royal equipage, the Duke and Duchess were then driven slowly about the principal streets, which were lined with 50,000 cheering people. The Duke kept his hand constantly at the salute, and the Duchess bowed and smiled from right to left as the carriage moved slowly along. At 1 o'clock a halt was made at the new drill hall, which was formally occupied by the Duke. Then his Royal Highness presented medals to about forty South African heroes and to a Red Cross nurse.

Luncheon was then served in the mess dining rooms. At the royal table thirty sat down, including the royal party, Mayor Townley and Mrs. Townley, Colonel Worsnop and Mrs. Worsnop, Sir Charles Hibbert Tupper and Lady Tupper, Admiral Beaumont, G. R. Maxwell, M. P., and Mrs. Maxwell.

In a separate apartment were the attaches of the Duke, the aldermen and various lesser local officials.

Luncheon over, the Duke and Duchess were driven to the Hastings lumber mill, which was in full operation for their benefit. School children sang patriotic songs and gave an exhibition drill. Tonight the Duke and Duchess dine and sleep on board the flagship Warspite.

SKIN TORTURES

And Every Distressing Irritation of the Skin and Scalp Instantly Relieved by a Bath with CUTICURA SOAP

And a single anointing with CUTICURA, the great skin cure and preserver of excellence. This is the purest, sweetest, most speedy, permanent, and economical treatment for torturing, disfiguring, itching, burning, bleeding, scaly, crusty, and pimply skin and scalp humours with loss of hair, and has received the endorsement of physicians, chemists, and nurses throughout the world.



Millions of Women

Use CUTICURA SOAP, exclusively, for preserving, purifying, and beautifying the skin, for cleansing the scalp of crusts, scales, and dandruff, and the stopping of falling hair, for softening, whitening, and soothing red, rough, and sore hands, in the form of bath for annoying irritations, inflammations, and chaffings, or too free or offensive perspiration, in the form of washes for ulcerative weaknesses, and for many sensitive antiseptic purposes which readily suggest themselves to women, and especially mothers, and for all the purposes of the toilet, bath, and nursery. No amount of persuasion can induce those who have once used it to use any other, especially for preserving and purifying the skin, scalp, and hair of infants and children. CUTICURA SOAP combines delicate emollient properties derived from the purest of vegetable oils, with the CUTICURA, the great skin cure, with the perfect of cleansing ingredients and the most refreshing of flower odours. No other medicated soap ever compounded is to be compared with it for preserving, purifying, and softening the skin, and for all the purposes of the toilet, bath, and nursery. Thus it combines in ONE SOAP at ONE PRICE, the BEST skin and complexion soap, the BEST toilet soap and BEST baby soap in the world.

Complete External and Internal Treatment for Every Humour. Consisting of CUTICURA SOAP, to cleanse the skin of scales and crusts, and often the thickened cuticle, CUTICURA Ointment, to instantly allay itching, inflammation, and irritation, and soothe and heal, and CUTICURA RESOLVENT, to cool and cleanse the blood. A SINGLE SET is often sufficient to cure the most torturing, disfiguring, and humiliating skin, scalp, and blood humours, sufficient to cure the most torturing, disfiguring, and humiliating skin, scalp, and blood humours, sufficient to cure the most torturing, disfiguring, and humiliating skin, scalp, and blood humours. Co., Sydney, N. S. W. So. Africa Depot: LEWIS & CLARK, Cape Town. "All about the Skin, Scalp, and Hair," free. POTTER DRUG AND CHEM. CO., Sole Props., Boston, U. S. A.

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PERU	OCT. 12	AMERICA MARU	OCT. 15
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PEKING	NOV. 7	HONGKONG MARU	NOV. 7
GAELIC	NOV. 14	CHINA	NOV. 15
HONGKONG MARU	NOV. 28	DORIC	NOV. 15
CHINA	NOV. 30	NIPPON MARU	NOV. 28
DORIC	DEC. 18	PERU	DEC. 15
NIPPON MARU	DEC. 18	COPTIC	DEC. 15

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AGENTS.

COMPANY WIPED OUT

Command of 9th U. S. Infantry is Slaughtered.

MANILA, Sept. 29.—A disastrous fight between United States troops and insurgents occurred yesterday in the island of Samar, near Balangiga. A large body of insurgents attacked Company C, Ninth United States Infantry, only twenty-four members of the company escaping. All the others are reported to have been killed. The company were at breakfast when attacked and made a determined resistance, but the overwhelming number of the insurgents compelled them to retreat. Of the survivors who have arrived at Basey, eleven are wounded.

According to the latest returns the strength of the company was seventy-two. The survivors include Captain Thomas W. Connell, First Lieutenant Edward A. Bumpus and Dr. R. S. Griswold, surgeon.

Captain Edwin Bookmiller of the Ninth Infantry reports that General Hughes is assembling a force to attack the insurgents.

The insurgents captured all the stores and ammunition of the company, and all the rifles except twenty-six.

Captain Lawrence J. Hearn of the Twenty-first Infantry reports a severe engagement with insurgents near Candalaria, the Americans losing one killed and two wounded. The insurgent loss has not been ascertained. The Americans captured 30,000 pounds of rice and several hundred rounds of ammunition.

MANILA, Oct. 3.—The latest advices from the island of Samar give harrowing details of the slaughter of the members of Company C, Ninth United States Infantry, last Saturday at Balangiga. They state that the President of the town, claiming to be friendly, led the assault in person.

The fight was long premeditated, and the Filipinos were called to commit the slaughter by the ringing of church bells at daylight. They got between the soldiers, who were breakfasting, and their quarters. The insurgents were mostly armed with bolos, but they had a few rifles with them.

On hearing of the slaughter, Colonel

Isaac D. de Russey of the Eleventh Infantry started for the scene immediately with a battalion. The body of Captain Connell had been tied at the heels, saturated with kerosene, and partly burned. Forty-five bodies have been buried in a trench, leaving seven unaccounted for. The charred remains of many were recovered. In numerous instances the bodies had been badly mutilated.

Three hundred Maccabees will also be dispatched to the scene of the massacre on board the Legaspi.

NEW YORK, Oct. 2.—A cable to the Sun from Manila says: General Chaffee has sent a battalion each of the Seventh and Twenty-sixth Regiments to Samar, and the severest kind of warfare will be waged against the rebels of that district. During the past few months the American troops have been restricted in their operations by rains, which are still prevailing.

The navy, which is co-operating with the army, has sent three gunboats to Samar. Commander Marix will go to China and Japan to arrange for the purchase of twenty steamboats, which will cost \$1,600,000. These vessels will be used for the insular revenue service, and will also provide complete inter-island communication.

The new civil code became operative yesterday.

THE KAISER IS MEDDLESOME

LONDON, Oct. 3.—The Berlin correspondent of the Times says the main difficulties between Emperor William and the representatives of the City of Berlin have been thrown into the background by the dispute regarding the advisability of permitting tram lines to cross Unter den Linden, Berlin's principal and most beautiful thoroughfare.

Most people sympathize with the Kaiser's determination to prevent Unter den Linden being disfigured. The question, however, has now assumed a more serious aspect, since it is learned that certain exalted personages led the Berlin magistrates to believe that the Kaiser approved their scheme and the municipality bought the tramway systems from Herren Siemens and Halske for 10,000,000 marks (\$2,350,000).

The incident is regarded as another proof of the lack of regular personal intercourse between Emperor William and his Minister. It is said that the Emperor has given orders that the plans for every architectural project in Berlin are to be submitted to him. Even the journals most strongly favoring the Government dissent from this decision.

A cablegram to the Times from Wellington, N. Z., says the charge against the missionaries of London Mission, in Samoa, of interfering with the freedom of the natives to attend the Kaiser's birthday celebration, has been absolutely disproved, after the fullest investigation in Berlin and Samoa.